

Aviation News

McGraw-Hill Publishing Company, Inc.

SEPTEMBER 27, 1943 50 CENTS



Directs Record Air Expansion: Vice Admiral John S. McCain, Deputy Chief of Naval Operations (Air), who dispatches scores of new planes to fighting fronts. Navy's air fleet is growing more rapidly than the Army's.

DSC Aids Old Condor Line
Agency sending new Douglasses, repair and maintenance parts, and personnel to Rio to build up Brazilian national airline.



CAB Issues Overseas Mail Report
Estimates 142 to 235 planes could carry all the first class mail transported by air and surface between U.S. and foreign countries.



Aircraft Employment Is 1,600,000
Industry now employing 1,600,000, with thousands more to be hired; 1943 to see about 85,000 planes.



U.S. Chamber Asks Free Transit
Association accepts 10-point recommendation for unrestricted flight of commercial aircraft over all countries after the war.



Big Air Push Near in Pacific
Navy to receive new plane types in coming months to swell already heavy flow to entire Pacific arena.



Airline Dividend Prospects
Financial commentator says lines are expected to concentrate on ploughing back earnings in coming months rather than declare new dividends for stockholders.



Industry Holds Post-War Meeting
Top executives of aviation assemble at Colorado Springs and chart conversion to peacetime operations and long-range objectives.

A Light Weight, Heavy Duty LEVER SWITCH Built to take the "Bumps"



• Terrific per inch deflection here lifts effect on the Mossman No. Q-42 Heavy Duty Lever Switch. Once locked in place, its instant mechanism holds its security as a vital light is brought... but 47% comes with slight contact pressure... The No. Q-42 Lever Switch was especially designed for aircraft use. It withstands 500,000 cycles control action. Its parts loose away in either zinc or aluminum.

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Positive action deflection mechanism consists of a stainless steel spring, which is housed in a brass tube, mounted and sealed in the handle of the switch frame. This spring acts to pressure against two free rolling, stainless steel balls. Pressure on the lever causes the outer ball to follow the contour of the lower plate, giving positive loading or spring return action. This pressure is independent of the pressure of the contact springs. Heavy contact spring pressure is unaffected by vibration.

Features of the Mossman No. Q-42 lever switch include:

1. Standard heavy duty contacts are 15/16" diameter free silver for 200,000 cycles, 100 volts A.C. load included. Other contact materials are available to meet special conditions.
2. Contacts are made with polished phosphor bronze springs. Ample wiping action of the heavy duty contacts insures close contact force, and provides superior lubrication of both contact surfaces with longer life.
3. Spring-mounted release mechanism holds the handle assembled under pressure to insure equal distribution. Edges are rounded.

Donald P. Mossman, Inc.

6133 N. Northwest Highway, Chicago, (31) Illinois

MOSSMAN

Electrical Components

AVIATION NEWS

September 27, 1943

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SCHERER BROWN	Public Copy Editor
BARBARA FORD	Editorial Assistant
EMILIE HENSLER	Art Director

Editorial Headquarters 182 National Trust Building Washington, D. C.

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James H. McHenry, President and General Counsel
H. H. Rogers, President and General Counsel
H. H. Rogers, President and General Counsel
H. H. Rogers, President and General Counsel
H. H. Rogers, President and General Counsel
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to look up the chain, adds, "No other portion of the great aircraft program has moved ahead so swiftly." It looks like the Navy's service, and a typical Navy answer of overstatement to critics of naval aviation.

BABY FLAT-TOPS—Nobody knows how many, but we do know from the reduction and almost complete absence of enemy submarine destruction of our cargo vessels in the Atlantic that the Navy has a lot of them under way. Not only that but the Navy has transferred large numbers to the British who—quick to take advantage of such a situation—have released portions to the press showing deck views of carriers of this type. We haven't seen any such views from our Navy yet, but would like to.

AUXILIARY CARRIERS—With auxiliary carriers, so-called, doing such a good job, it is hard to believe that the Navy rejected them before contracts were given to the Maritime Commission. The made good it, though, that the Navy did just that. Now, however, the Navy is said to be demanding that the auxiliary carrier program be doubled at least. Laid this is to be based on the Navy's belief that the Maritime Commission at that time, due to rapid reduction in the time of Liberty ships on the ways, had space and manpower and was prepared to do the job. The Maritime Commission, of course, is authorized to build Navy ships under the Maritime Act of 1934.

AIRCRAFT PRODUCTION—Best estimates by production experts, based on prevailing output sets this year's production of planes at between 55,000 and 60,000, are quite double the 1942 output. Schedules for next year are being planned on a 100,000-a-month basis, a figure which probably will not be reached before mid-year.

EXPENDITURES FOR AIRCRAFT—The government has announced that its war expenditures during July amounted to \$6,116,000,000. The value of products manufactured by the aircraft industry was approximately 13 percent of the total amount spent for the entire war production program.

PERSONNEL EXPANSION—Out at Good-year Aircraft in Akron where they are building the PG-17 Corsair in ever-increasing numbers, is a typical example of the expansion in the industry. An unannounced organization which started with 60 people grew in less than a year from 3,600 to 25,000, nearly half of whom are women.

Washington Observer

SALES FIGURES—Best estimates by industry experts at this year's total sales of airplanes, engines and propellers at between 11 and 12 billion dollars, considerably under WPA's announced figure of 20 billion dollars for 1943. Even so, the estimate is more than double 1942's total sales of \$5,900,000,000. This indicates of the aircraft industry's growth is emphasized when this is compared with the 1923 sales which amounted to only \$125,000,000.

OVERLOOKED—Out on the West Coast where the labor market is tighter than the paper on the wall, there are other industries besides aircraft and shipbuilding and high-octane gasoline. This is sometimes overlooked and naturally. But it was hardly to be expected that the manpower planners in Washington would overlook these other vital industries—although competent experts any they did. The industries were lumber and non-ferrous metal. They need men, too, and their production is vital. Government officials have discovered this new and unduly, but take tardy steps.

There is a probability that a large labor pool may be needed for new planes to be produced with the lagging off of the construction program. There is some resistance to this, of course, from some construction and machine tool labor circles, but the general feeling is they will have to get in line, particularly in view of the critical nature of the manpower situation.

RUSSIAN PRODUCTION—Best estimates, and even these are hard to get from the uncooperative Russians, indicate Soviet aircraft production is definitely on the upgrade now that their industry has completed moves eastward and is beginning to operate in volume. Some experts put Russian production at around 1,600 planes a month.

BARUCH MANPOWER REPORT—Last week in this space we wondered out loud why the manpower report by Bernard Baruch had not been made public in the meantime. It was, as the result of protests from the FBI. Since it has been, at least one reason for the covering up is obvious. It was Baruch's charge that government agencies were clashing for power and authority and not working as a team. The record on agencies particularly devoted to the war effort isn't too good after nearly two years of war. This despite President Roosevelt's appeal to Congress which said there were occasionally disputes and possibly errors of honest judgment. Lots of people in Washington think it is worse than that and are saying so publicly.

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Aviation News

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SEPTEMBER 27, 1943

CAB Says 142 to 235 Transports Could Fly All Overseas Mail

Report released by research and analysis division expected to furnish basis for future planning, although separate report on passenger potential is under way.

By MERLE NICKEL

One of the yardsticks—perhaps the most important—by which the Civil Aeronautics Board may measure the need and nature of international air routes from this country has been provided through a comprehensive study of United States overseas mail by the Research and Analysis Division of the Board's Economic Bureau.

Premised on optimistic approach, the survey discloses that at least 142 planes and possibly as many as 235, could carry all the first class mail now carried by sea between the United States and overseas countries, depending on geographical coverage and assuming daily scheduled frequency.

Based on DC-3 Size—Though the report did not so state, the reference was understood to be in planes of the approximate capacity of the DC-3.

Both minimum and maximum estimates assumed average utilization of 450,000 miles per year per unit for active and reserve aircraft over the most economical routes between United States sea terminals and overseas way-stations, with successive steps following a "reasonable pattern", 100 percent schedule completion and no allowance for seasonal variation or irregularity in traffic volume.

Furthermore, these estimates of plane requirements were made "to furnish broad perspective as the role of operators which might be indicated if all or the greater part of the first class surface mail included in the survey were diverted to the air."

Passenger Traffic Studied—Prepared by R. K. Abernethy, principal analyst, the survey was devoted only to mail. F. H. Crozier,

chief of the division, declined, however, that a similar study of overseas passenger traffic has been started.

Crozier commented that the air service which would be furnished under the mail plane estimation "quite obviously . . . would provide substantial capacity for passengers or other types of traffic."

Despite its limitation to mail, the exhaustive study may be expected to wield a strong influence on the board. The need for mail routes obviously will be one of the leading factors on which the board must base its international route decisions.

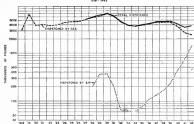
Foundation Traffic—Ample confirmation of the favorable character of first class mail as "foundation traffic for new air services" has been removed in both the domestic and international air transport field, Crozier pointed out.

Mail, he said, meets high standards of premium air traffic, its transportation is traditionally a matter of public concern, and it often established means of government support to commercial services. And it may be diverted to air by adjustment of postal rates or other government action.

"Seaside first class mail," he asserted, is a foreword to the survey, "should furnish not only a measure of the service mail available to air transportation between the United States and overseas regions, but an index to general air traffic potentials as well. The interchange of mail is prime evidence of close social and business ties between communities which are responsible for the generation of traffic of all types."

Follows Mail Pattern—"Also, it seems reasonable to suppose that the

AIR MAIL AND LETTER MAIL DISPATCHED BY SEA
(1938-1942)



Air Mail's Tremendous Gain: This special chart prepared by the CAB to accompany its survey shows the great gain in letter mail dispatched by air versus the losses. Note that the total sent by air approached that sent by surface vessel.

portion of general air traffic can be expected to correspond roughly with the pattern formed by mail flow, both as to dispersion and relative volume."

The survey showed annual volume of United States mail sent to foreign countries by sea is about 70,000-800 pounds, of which 6 to 8 percent is letter mail, 38.2 percent parcel post, and 53.9-55.0 million pounds of letter mail consists of some 150,000,000 individual pieces. Of this type of mail, about 2,800,000 pounds are dispatched across the Atlantic, 400,000 across the Pacific and 2,380,000 to Central America, South America and the West Indies. Canada was not included in the study because mail to the Dominion from the United States is not inspected.

Annual payments to sea transportation agencies for transport of letter mail only is approximately \$900,000.

331-Bus Rapid Trip.—Maximum estimates, 331 planes will be produced on the assumption that one daily round trip will be operated to all countries to which 500 pounds or less of first class mail daily is dispatched from the United States, with additional schedules in excess of that amount to the extent required to establish average maximum mail load limits of 500 pounds.

This led to the finding that 331 planes would be required for service to 330 spots, Africa, the Near East and India, flying 161,400 miles a day and carrying 469 pounds of first-class mail per flight on the average. To the Pacific-Ocean region, the figure is 34,056 daily plane miles, 96 planes required, and 308 average pounds per flight. To the Caribbean-

Latin American sea, daily plane mileage was estimated at 96,000 for 33 planes carrying an average per flight of 283 pounds.

Maximum averages to all regions this are 348,388 daily plane miles, 333 planes required and 331 average pounds per flight.

Maximum Needs.—Under maximum estimates (342 planes), percentage per flight increase, while daily plane mileage and number of planes required decreased. These estimates were based on the assumption of a daily round trip service to all Caribbean and Latin American areas now served by American airlines and to all other countries to which mail poundage ranging from 38 to 1,800 pounds daily is dispatched exclusively through South Africa, Korea and India (which involve long hauls and low air mile potential) with additional schedules for mail in excess of 1,000 pounds a day in number needed to establish maximum load limits of 1,000 pounds.

Europe-Africa-Near East daily plane mileage would be 18,000, the number of planes required 92 and the average pounds of first-class mail per flight 684 to Pacific-Ocean, 66,000 plane miles daily, 94 planes required and 487 pounds average mail per flight. To Caribbean-Latin America, 32,000 plane miles daily, 26 planes required, and 402 pounds of mail average per flight. The average here for all regions showed that the above would be required, flying 174,000 miles a day, with a load averaging 532 pounds of first-class mail per flight.

The statistical material included in the 331-Bus Rapid Trip covered volume distribution, seasonal variation and trend of overseas mail the num-

ber of pounds of United States airlines first-class mail, prints and parcel post, by points of origin and countries of destination. Maps and charts indicated average daily volume of letter mail by sea and air to all overseas countries in a selection of printed international air routes of the world in operation during 1939.

DSC Rebuilding Brazilian Line

Douglas planes and U. S. mission sent to revived Corrientes carrier.

The second of four new Douglas DC-3 transports is being sent this week for Rio de Janeiro with personnel for an 18-month mission in Brazil, and large cargoes of spare parts, spare engines, radio equipment and other maintenance material.

The first plane of this new mission left about ten days ago with the other two scheduled to fly within the next two weeks.

Active here in the project was completed between the Brazilian National Airline and the U. S. Defense Supplies Corp. Stockholder W. Morgan, vice-president of DSC in charge of the American Republics Aviation Division, has sent his chief technical adviser, Francis L. Dunne, to Rio to be director of the mission. Dunne was an American Airlines and Colonial Airlines official until he went with DSC two years ago.

Center Expanded.—Twenty-two American technicians, making up the nucleus, will help rehabilitate the old German-Brazil airline. One day, when the Cruzeiro do Sul, or Southern Cross Airlines, some 50 Germans in key positions were removed from the airline and the DSC technicians went into training requirements for these men. A pilot will check out the Brazilian pilots on the DC-3 transports.

The "de-Germanization" of Corrientes was one of the most difficult jobs of the war. The airline, which was one of the most profitable and extensive lines in Latin America. The contract under which the mission is operating was signed last April and a group, including Dunne, went to Rio under the terms of the plan. Douglass transports had been allotted to the Brazil airline by the Army earlier in the year and deliveries are now being made at two-day intervals.

Some of the planes and parts have been sold to the Brazilian airline and the transfer does not cease under lend-lease. Morgan, who has

been in charge of the American Republics Aviation Division since July, 1943, when W. M. Hayden came as aide to Secretary of Commerce, pointed out three tremendous advantages to Latin America in this mission.

Defense Supplies Corp. he emphasized, sells at cost, makes terms which are easier to meet than those at private industry, and through the centralized material allotment from War Production Board, is able to provide replacement parts. WPA, the Joint Aircraft Committee and the State Department are consulted by the American Republics Aviation Division in making allocations of materials for Latin America.

Black Mail Airliner.—The four ships now being sold to Corrientes de Rio are the last planes the Army has allocated to DSC. The Corporation, however, is hopeful that the Army and Navy will soon have sufficient additional planes and equipment available to permit the expansion of the program in Brazil and other countries in the South whose airlines have been "de-Germanized." As a result of this DSC's expansion program, there is only one remaining Axis airline—the Corporation Sudamerica de Servicios Aereos in Argentina, which is Italian owned.

New DPC Contract For United Aircraft

Summary of U. S. actions shows on wages, labor and construction contracts.

Defense Plant Corp. authorized an increase in its contract with United Aircraft Corp., East Hartford, Conn., for the construction of a plant in Birmingham, Ala., which will make assemblies for Consolidated Vultee, also was authorized by DPC. This brings the overall contract to about \$370,000.

DPC also increased its contract with Aluminum Forecasts, Inc., to provide additional facilities at a plant in Pennsylvania at a cost of \$375,000, resulting in an overall contract to about \$370,000.

Stop Order Lifted.—In January, when WPA halted a number of CAA airport projects, Kenner Field at



RADIO-CONTROLLED AUTOMATIC PILOT DISCLOSED:

Radio-controlled motors in the tail of this Fortson captured the rudders and elevators after regular control cables from the pilot's cabin had been severed by a raiding Messerschmitt. The AAF has patented Minneapolis-Husquelt Regulator Co. to reveal that electronically controlled automatic pilot has been standard equipment on U. S. heavy bombers "for months," making it possible to control the plane from five or three points. It says the device described by Aviation Week's military correspondence Aug. 3, which allows the bombardier to fly the bomber during a bomb run. The device has shortened the run and holds the plane to an unwavering course, counteracting immediately every cross current or variation.

New Orleans was completed, except for lighting facilities. WPA has now lifted its stop order and the airport may be completed at a cost of about \$83,000. Permission also has been granted for airport facilities at Fort Worth, N. D., at a cost approximately \$110,000. A new allocation of \$76,000 by the CAA for the Westchester County Airport at Rye Lake, N. Y., will permit completion of this airport. It is a 20-25 percent complete and is limited use. A total of \$3,500,000 has been allocated for construction.

Engineering Contracts.—The War Department awarded engineering contracts to two firms, one for \$800,000, the other for \$160,000, for construction of landing strip extension and runways at an Ames Co., Mass., field. An agree in Prince Co., Wash., will cost about \$90,000, and additional runways at a field in Curry Co., N. M. add up to about \$88,000.

Wage Increases Granted.—To further wage adjustments were approved by the NWLR at the Westinghouse plant of Bostons Airplane Co., about 1,600 officers and technicians received approval of increases ranging from 3c to 15c an hour, effective Oct. 6, 1942. A uniform hiring rate of 60c an hour was established, with automatic in-

creases of 5c an hour every four months until 75c, or the maximum of the appropriate classification, whichever is lower, is reached.

Night Bombers.—At the Manetta, Cal., plant of Bell Aircraft Corp., night bombers and reconnaissance aircraft having rates were approved by the board. Bombers approved provide for 1c an hour premium pay for the second shift and 5c an hour for the third shift, with night wages pay for air and a half-hour overtime. The board also approved the company's request to adjust rates for about 600 "superior" employees, not to exceed 7 percent in any one department.

Aldworth Dies

Col. Richard Aldworth, World War air force, former superintendent of Newark Airport, and nationally known as civil flyer, died last week at Kelly Field. He was 48. As a leader in civil aviation, Aldworth supervised drafting of regulations for control of commercial, military and private flying. He re-entered the Army two years ago and played a leading role in reorganizing Air Forces personnel for the Flying Tigers. For that service, he was awarded the Legion of Merit.

Helicopter Deflated

Expectations of a helicopter "in every backyard after the war are 'very an advertising man's dream,' considering the present state of development of this rotary-winged craft, Charles F. Kettinger, General Motors vice-president in charge of research and head of the National Inventory Council, told the News-Devotee editor last week.

"You may have helicopters some day," he pointed out, "but if you will examine them from a practical standpoint you will find we haven't got one yet that is practical for military use, say, but for commercial purposes."

No Fuelproof.—Kettinger's statement is in line with indications by

military experts that the present helicopter is as hard to handle to fly than the airplane and that it would not be safe to turn the aviator loose in it, even with the most reliable research work and simplification of controls is needed before the helicopter can be turned into the flexible aviation man's aerial vehicle, they say.

So far, the Army is setting no dependence on helicopters and doesn't expect them from the Navy. The Navy's interest here is in the use of the helicopter as a scout plane, which is in line with Navy Secretary Kneass's statement recently that the Navy isn't interested in the helicopter as a scout plane of the Atlantic and will not for some time.

SAE Air Group Opens War Problems Forum

Production and field maintenance among topics, at Los Angeles.

Leading aeronautical engineers are meeting in Los Angeles this week to discuss aircraft, aircraft engines, propellers and accessories, aircraft production and field maintenance.

Principal speaker will be Brig Gen E. E. Adler, chief, Personnel and Training Division, Air Service Command, at the annual session of the SAE National Aircraft Engineering and Production meeting.

Field Maintenance—The program calls for discussions of field maintenance, aircraft propellers and engines and interchangeable powerplants on Sept. 23, aircraft accessories and production, and powerplant installations Oct. 1, aircraft engineering Oct. 2, in addition to other subjects.

Harry Woodford, president of Consolidated Vultee, will preside at the general session. Chairman of other meetings include Eugene Stunkel, Lockheed, A. L. Klein, Douglas, T. F. Bergman, Wright Aero, Ltd., C. L. Johnson, Lockheed, Gunnar Edquist, Kinner Motors, A. E. Raymond, Douglas, John Young, North American Aviation and John G. Lee, United Aircraft Corp.

Meetings—Part of a series of wartime engineering conferences, scheduled to production of matured military equipment, are sponsored by the Society of Automotive Engineers and its four Pacific Coast



HURRICANE TANK BUSTERS:

British Information Services release this photo showing a ground crew servicing RAF tank busters—Hurricane fighters equipped with 46-inch missiles, shown here in

Sections, with the cooperation of the Aeronautical Chamber of Commerce, Air Transport Association, and National Aircraft War Production Council.

AAF Shuffles Chiefs

Berenson expected to command U. S. tactical air force in England.

Transfers of general officers to key positions in the Army Air Forces continue with Maj. Gen. Lewis H. Berenson's future assignment giving rise to speculation.

Berenson, who has been commander of the Ninth Air Force in the Middle East theater, has been spotted by many authorities as the future commander of an American tactical air force in England to support large scale European operations from that country.

Maj. Gen. Ralph Royce, formerly commanding general at the First Air Force Training Post, is to replace Berenson in the Middle East and Brig. Gen. Frank D. Hunter takes over the First Air Force.

Hunter has been commander of the Eighth Fighter Command in England. He directed recently the first unit equipped with P-47 Thunderbolts.

WTS Receives 250 Navy Trainers

Being used aircraft being used for course near mission of 7,000.

The Navy has turned over about 250 N3N primary trainers to the

CAA-War Training Service. The plane is built at the Naval Aircraft Factory and is similar in design to Boeing's N3S.

The first 50 planes were delivered at Squantum Naval Air Station, Squantum, Mass. At the same time, the Navy gave WTS some spare parts for the planes, according to W. L. Jack Nelson, technical assistant to Executive Director R. McLean Stewart.

6,926 in Use—The most recent figures show that WTS is now using 6,926 planes in the program and that maximum number of planes for the courses—1,000—will be reached soon.

Operators of schools in WTS will now have relief on the critical engine bearing situation, which has grounded many planes. War Production and War Production Board have issued directives permitting the production of more bearings for WTS ships.

During the last few weeks, two new schools have been added to the program.

Navy Plane Expansion Faster than Army's

Deliveries of combat craft double in 1943, and again in first half '43.

"Navy aircraft production is the fastest expanding segment in the nation's air-power building program," according to a Navy department production review, which adds that "No other portion of the great aircraft program has moved ahead as swiftly."



Eimac gets another "E"



Mass production of a device that has always been hand made in a laboratory is an achievement in itself. But when the whole nation gives pause to recognize outstanding conditions in this mass production the achievement becomes all the more striking.

Such honors have been bestowed upon the Eimac organizations not once but twice. First to the San Bruno, California, plant (September 1942) and second, less than a year later, to a plant in Salt Lake City, Utah, that is little more than one year old.

Where does the credit go?... to the men and women at the Salt Lake City plant now for their recent triumph.... and to the men and women of both plants always for their collective cooperation and hard work.

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San Francisco, California, U. S. A.

Production of Navy planes unimpeded in the 12 months between Jan. 1, 1943, and July 1, 1943. Combat plane production doubled in 1942, and again in the first half of 1943. Between July 1, 1942, and July 1, 1943, the Navy completed 33,467 planes of all types, including those turned over to the Navy by the Army Combined Airplane weight amounted to almost 65 million pounds.

Combat Ships—The Navy has been concentrating on combat ships, obtaining most of its non-combat aircraft through the Army.

Production pattern of the Navy has been to equal in six months the output of the preceding twelve months. In 1941, 1,284 planes were produced, while deliveries in the first half of 1942 totaled 1,401. The rise in Navy aircraft plane production, the report continues, has been so steep that deliveries in June, 1943, amount for 16 percent of all planes turned out in the three years between July 1, 1940, and July 1, 1943.

Included in the combat aircraft classification are big four-engine patrol bombers as well as fighters. Unlike the Army's program, however, Navy emphasis has been on combat planes.

Helicot Production—Contracts for the first two experimental Navy Helicopters were let in August, 1941. First production contract was signed

Dec. 4, 1941. War-taught lessons were embodied in the plant as its production proceeded, and the first Helicopters were delivered late in 1942. In the first six months of 1943, monthly production has multiplied 16 times over total 1942 production.

Navy fighter planes can fly in one minute five times the weight of projectiles that their 1942 predecessors fired.

Big Defense Development—In the first half of 1943, Naval aviation contracts, which include bombs, bases and aviation air control, amounted to \$40,000,000. It increased to \$51,000,000 in the second half of 1942, and to \$12,800,000 in the first half of 1943. Aircraft purchases and leases valued at \$23,076,536 are not included in the other defense figures.

The carrier *Essex*, a 27,000-ton ship, was completed in December.

New Martin Plastic

Marvaul, a new photo-plastic, neither a synthetic nor a rubber substitute but a new material, is announced by Glenn L. Martin Co. It is a vinyl-type plastic with 100 percent recyclability, superior abrasion resistance, ability to stand constant flexing without fatigue, and impermeability to gases and liquids, according to the company.

100,000 Wasps Built By Pratt & Whitney

Latest engine displayed with No. 1, produced in 1943.

Production of the 100,000th Wasp engine was marked last week at Pratt & Whitney division of United Aircraft Corp.

On exhibition for the occasion, in which all employees and a group of Pratt & Whitney pioneer aviators participated, was the first Wasp engine, built in 1928, and borrowed from the Navy's permanent collection at Franklin Institute, Philadelphia.

This engine established the basic air-cooled radial design of the entire line of single and double row Wasp engines since developed. The 100,000th Wasp was made up of components from hundreds of subcontractors and vendors in half the state of the Union.

The seven current production engines, and lighter, smaller, and transport planes powered by Pratt & Whitney engines were also on exhibition both on the ground and in the air.

Tail Cone Speeds C-47

Device eliminates drag on Liberator transport, says George J. Newman, Division Manager.

Recent addition of a tail cone to the fuselage of Consolidated Vultee's Liberator transport has increased the top speed of the airplane, according to Division Manager George J. Newman, who added that the revision also simplified construction and reduces weight.

The transport, the C-47, is a modified version of the B-24 Liberator bomber and removal of the rear gun turret from the cargo compartment required that the opening be closed by a sheet metal fitting. Tests showed that addition of a tail cone created by the B-24 fuselage could be eliminated by attaching a 30-in. cone-shaped extension. The new installation weighs about 11 pounds less than the old installation time, Newman says, also is reduced.

Pesco Pushes Research

Pump firm, in announcing change in name, reveals post-war study.

Coincident with its change in name to Pesco Products Co., Pump Engineering Service Corp., of Cleveland says new products are under-

going exhaustive tests in its experimental laboratory.

The company, which produces precision pumps and accessories vital to the hydraulic and fuel systems of modern military planes, has grown with the rapid expansion of aviation during its ten-year existence.

Test Aid Campaign—A test advertising campaign, scheduled to run in five or six trade papers will talk about the company's extensive facilities for post-war developments in research and engineering which will be made available to wider fields. This campaign will run in addition to Pesco's current four-week national campaign, through Fuller & Smith & Men.

NWLB Creates Panel For Airplane Cases

New set-up expected to speed consideration of many disputes.

An Airframe Disputes Panel has been created within the framework of National War Labor Board to handle all cases now pending and which may arise in the airplane industry.

The panel, which will have representatives of the public labor and industry, will hear and consider all disputes arising in the airplane industry, in modification centers, glider plants and assembly plants and make recommendations to the full board.

The new organization is expected to speed up consideration of such cases as which there has been considerable delay—about 30 cases are now pending. At the same time it is presumed there will be recommendations on the panel with a knowledge of the particular and peculiar problems of the airplane industry.

Plane Executives Meeting War Chiefs

Seminars provide joint consideration of National Aircraft War Production Council.

Top-flight executives of the aircraft industry joined with leaders of labor, industry and the press in Washington this week for a series of conferences with Gen. George C. Marshall and other Army Chiefs to receive confidential reports on war strategy and its relationship to production.

The conferences at the Pentagon Building Sept. 27 and 28 are to be followed by a joint meeting Sept. 29 and 30 of the National Aircraft War Production Council Members.

The unprecedented action of the War Department in calling industrial executives to the press leaders to sit in on their secret planning was seen in Washington as a move designed to combat the feeling in some industrial circles that war production is nearing a peak which will permit some reconversion to peacetime economy.

The National Council members, following the general session, plan full discussion of the manpower situation and production problems generally in what are expected to be highly important, and significant sessions affecting the entire future course of national activities. Virtually all heads of member council companies are expected in Washington for these meetings.

Plane Industry Sets New Records As Congress Debates on Manpower

September production exceeds record August output, officials concede, with both unit and weight gains recorded.

While the manpower debate raged in Congress and elsewhere amidst a flurry of charges and counter-charges, the aircraft industry went right ahead producing the vital weapons which formed the basis of the country's defense.

Aircraft airplane output—highest in the history of the industry—was understood to have been bettered in September with increases not only in units, but in average weight of planes produced, indicating an upward trend in output of heavy bombers.

New Manpower Program—On the Labor-Management Peace Panel, this week saw the beginnings of the set-up for the new manpower program, although the details are not expected to be in operation for at least a month. As yet, expected, No. 1 labor priority, under the plan, is to aircraft with high-charge machine and shipbuilding close behind.

Paul V. McWalt, War Manpower Commission head, has sent the United States Employment Service a study and equipped to handle hiring on the West Coast, but reports from those indicate otherwise.

Production Occupancy Committees were established in Los Angeles and Seattle during the recent western trip of WPA Executive Vice-Chairman Charles E. Wilson and a two-weeks "settling up" campaign aimed at low labor priority violations inside over the prospect of slowing their manpower with aircraft and shipbuilding has a more or less successful climax.

More Plants Needed—Wilson told more than 200 industrial leaders at a closed meeting in Los Angeles that "despite as it is, aircraft production in this area is not enough."

The controlled hiring through the United States Employment Service has not been too warmly received by the aircraft companies, who have submitted proposals under which they would be given hiring ceilings and then permitted to employ their own personnel, instead of going through the Employment Service. What will come of that is a matter of conjecture, but the Administration is expected to stand by the Employment Service set-up.

Children Ties Problem—Wade Childers, Deputy vice-chairman of WPA for Field Operations, who will handle the manpower angle, plans to return on the West Coast through this week and report to the Production Executive Committee in an effort to ease hiring problems.

In the meantime, Telford Bowen, Director of War Relocation Authority, has announced that a contract requiring increase of employment will be placed in the West Coast region as any other region in which a program similar to the West Coast Manpower program might be applied "without the prior approval of the chairman of the War Production Board" or authorized officials.

The action was seen as part of the plan to coordinate more closely planning of war contracts and the availability of labor in the area involved. The revised directive in this connection takes into account changes in our economic program, indicating the increasing seriousness of the manpower problem, the comparative completion of our war construction and facilities program, the increasing strain on transportation and the necessity of more efficient use of programs while, at the same time, outlasting others.



MODEL MAKING BOOMS BIG BUSINESS:

Although the business world gives little thought to the thousands of youngsters who build plane models, the aircraft industry depends on adults who are skilled in turning out scale models for carrying wind tunnel tests. Men who are skilled in this art are in demand because of the industry's heavy 1947 shipbuilding sought these workers building an experimental model of the P-51 Mustang.

Extra hands for him... that leave him free to fly and fight

PERSONS' AUTOMATIC AIRCRAFT CONTROLS

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to solve your temperature and pressure control problems

backed by 25 years' experience, the recent Persons' developments mentioned above have been engineered to specifications of many leading aircraft manufacturers. They have proved

their merit in action. Our staff of experienced engineers is ready at any time to help you . . . to add extra heads in solving your temperature and pressure control problems.

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THE AIR WAR

COMMENTARY

Big Air Push Near in Pacific; May Use Munda To Bomb Truk

Commentator forecasts *Heilders* in action, with improved *Danlessies* and *Arangers*; more ship bombing ahead.

The stage is being set for a more extensive use of naval air power in the far-dang Pacific fighting. The carrier task force now on Marcus Island was but the first "sampler" of the heavy punches on the Japanese outer defense perimeter promised by Adm. Nimitz.

► **Devastating Raids** — Last week similar raids, also with carriers, were made on the Gilbert Islands. Despite huge losses in the South Pacific the enemy is showing in more places by the thousands, forcing them from his big base at Truk in the Caroline Islands via Kwajalein, New Ireland and Rabaul, New Britain, to the airfields on Bougainville, including Buai, Buell, Kohn and a new one at Kora. This fairly large island in the northern Solomons is the last hurdle between newly-occupied Munda and the important base at Rabaul and our air forces are hammering its air fields.

► **Enemy Plans Upset** — Sending all these planes to this area and replacing the very heavy losses inflicted by Gen. Kenney's Fifth Air Force in New Guinea has upset the enemy's plans for other areas. All air operations in the Solomons—Army, Navy and Marine—are under the tactical command of Maj. Twining of the Thirtieth Air Force, and air attacks of increased weight may be expected shortly. Munda may soon be used as a base for heavy bomber missions against Truk, about 1,000 miles to the north.

► **Big Losses** — During the past year's operations the Japs have lost well over 2,000 planes in the South Pacific, and the ratio of losses has averaged 3 to 1, currently running at nearly 5 to 1. For fighter planes the Navy and Marine flyers in the Vought Corsair (F4U) have a plane that gives them the mastery of the skies over the new version of the Zero and the still newer Type-61 and Type-3 fighters which they have recently encountered. The same goes for Army pilots using the Lockheed

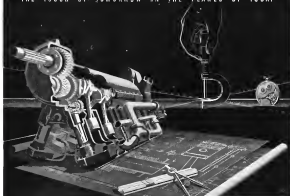
Lightning. In the raid on Marcus use of the *Grasshopper* (B-24) was first announced although it has been in successful use for some months.



BRITISH RELEASE NEW PICTURES OF GIANT GLIDER:

Airborne troops, who have finished their training, line up to enter huge British glider before a flight to an operational station. Also shown is interior of craft with "live load" of about 22 men. Largest U. S. glider in production is the Waco CG-4A, accommodating 15 men.





How Precise is Precision?

Master your partstock is a fine watch. One is a Ranger 32-cylinder in-line, air-cooled engine. See the comparison between the two listed below.

A whole battery of fine laboratory instruments, plus the genius of craftsmanship, are responsible for the Ranger's outstanding precision performance.

There's the spring-escape, for example—so sensitive it can spot a particle of metal as minute as seven parts in a hundred thousand. Fairchild uses it to explore and to control the metals in Ranger engines.

A quarter-million volt X-Ray is another Fairchild key to secrets that are hidden beneath 4 inches of solid steel. It tells our engineers which metals can "take it."

Under a metallurgical microscope our technicians can read the history of any metal. . . tell how it was processed during manufacturing.

With electrical instruments, they can detect a flaw one ten thousandth of an inch in depth that could be as one a billionth of an inch in diameter.

A beam of black light is played over machined surfaces to expose the structural "criminals" that may lurk within.

These and hundreds of other present day machines are routine machines for Ranger engineers and scientists. Result—the Ranger Engine... combination of precision and power... another Fairchild "touch of tomorrow in the planes of today."

A QUALITY WATCH

POINTS—about 550.
PERFORMANCE—average
part is a tolerance of
1/200 of a part per cent of
dimension.

SPEED of making
parts—balance wheel
available in 3 hours per
second.

A RANGER ENGINE

POINTS—over 1,100.
PERFORMANCE—average
part is a tolerance of
1/200 of a part per cent of
dimension.

SPEED of making
parts—balance wheel
available in 3 hours per
second.

SEE U.S. WAR BONDS AND STAMPS

FAIRCHILD

ENGINE AND AIRPLANE CORPORATION
39 ROCKEFELLER PLAZA, NEW YORK

1. See 4 North Douglas, Bismarck, N.D.

2. See 4 North Douglas, Bismarck, N.D.

3. See 4 North Douglas, Bismarck, N.D.

through the production and operational loops proved to be a tougher assignment than it looked like a few months ago. It appears now that the bugs have been exterminated.

► Reconnaissance—In the Pacific theater, with its vast distances, nothing is more important than aerial reconnaissance. It discovers the enemy of his weapon of surprise and was one of the keys to the great victories of Midway and the Battle of the Sea. As a performer in this role is the Navy version of the Liberator, designated PB4V, used as a high speed, long range patrol bomber. With the recent on patrol As a matter of fact, the Navy version was stressed of much of its weight in order to provide increased range. Its speed and heavy low-power drive is an excellent chance of getting back if jumped by a flock of Zeros.

Two other land based bombers are used by the Navy in the important anti-submarine warfare, the North American Mitchell (AAF B-24) and the Vega Ventura (AAF B-34), used largely by the RAF Bomber Command. These dual, powerful two-engine ships have been specially equipped with secret anti-submarine armament.

► Ship Bombing—Another threat in the Pacific air warfare will be an increased use of maximum altitude or "skip" bombing wherever action comes within range, for example, of land-based Mitchells and Hornets, used with outstanding success in the Battle of the Bismarck Sea. The Navy is testing out this technique and is understood to regard it as a useful variant of the aerial torpedo attack under certain conditions.

The overall picture of the aviation looks good. With better planes than ever, and for more of them, heading toward a strength of more than 37,500 mentioned some time ago, and with stepped-up training progress coming along as schedule, there are again ahead for the day ahead.

AIR WAR REVIEW—History was made on the Salerno beachhead where our Fifth Army (allied) and moved to the attack again under aerial support during which Gen. Eisenhower's tactical and strategic ideas seemed to become their fall might against the enemy. The Nazis having made their try, reserves exhausted, went on the defense.

► Naval Boat—While our naval units supported the ground forces with intense fire, our tactics in force was initially hampered by the dis-



South Pacific Ambulance: Naval Air Transport Service Douglas DC-3s in the Pacific carry freight, mail, and casualties from the front. A wounded man is being taken off a transport near a hospital.

tance of its bases in Sicily and the south. Reinforcements in men, guns and munitions poured on the beaches, building our strength and then the Fifth Army struck again. Bombers, fighters, heavy planes which could be gathered from North Africa and Middle East swooped on Nazi strong points, airfields, gun positions, troop movements. They drove the Nazis from the air, this time for good and the Fifth Army moved on.

Heavy airplanes in our possession are being rushed to reconstruction by our engineers.

► German Supply Line Cripped—On the European Front, the RAF and the Eighth U. S. Air Force targeted wide hard blows. Most significant, perhaps, was the British bombing of coastal shipping. Yards at the French Atlantic town of Nantes, western entrance of the Mt. Casais Tunnel, crippling the Lyons-Tunis Railway which were the German Panzer bombing, has had to take much of the burden of German supply in Italy. The attack was coupled by blasting of the railway viaduct near St. Raphael on the French Riviera, leaving Lyons, Marseilles and Genoa.

Events in Europe, while important and significant, should not eclipse Gen. MacArthur's brilliant victory in New Guinea, where first Belamon and then Los, seek enemy strongholds, fell in quick succession in American and Australian troops.

► Berlin Raid—Shocking a five-day ball in heavy blows on the Continent, a two-way attack was delivered. British bombers attacked Berlin in what appeared to have been a massive raid by swift, two-engine Mosquito bombers on jacked targets. Heavier waves of four-engine bombers bombed a rubber factory at Mauthausen, 69 miles northwest of Vienna.

► Gilbert Island Raid—Navy announcement of the heavy raid on the Gilbert Islands, some 300 miles northwest of the Solomon, has opened the way on another sensitive spot—has the mission next.

In Burma and China, our air forces are continuing to keep the enemy in terror. Up in the North Pacific, Bismarck once more felt the weight of American bombs, in a successful raid which was, however, quite costly in planes and personnel losses.

Trail Blazing in the Skies

1924



THE FIRST USE OF DURALUMIN IN AIRCRAFT

— by a private American manufacturer — was in the tail of the Army scout-typed airplane ES-1, built by Goodyear in 1924. Its tale was then known of the technique of working duralumin. Good year engineers spent a year developing methods of forming, heat-treating and riveting the metal — before beginning work on this kind. Many of these practices first pioneered by Goodyear are now standard in duralumin aircraft construction.

HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE AIRCRAFT INDUSTRY

1. By maintaining subsidiaries in manufacturing specifications.
2. By designing parts for all types of airplanes.
3. By re-engineering parts for mass production.
4. By introducing new materials to lighten and the solution of any design or engineering problem.
5. By building complete airplanes and aircraft.

1943



"KNOW-HOW" IN AIRCRAFT METAL WORKING IS THE SECRET

of Goodyear's ability to serve airplane manufacturers today in the design (or redesign) and manufacture of all types of parts and subassemblies. Now Goodyear is producing wings, floors and control surfaces for all types of airplanes from jet fighters to the toughest bombers. And in addition Goodyear, along with other companies, is building for the Navy the speedy Vought-designed "Corsair" — the agile fighter that is literally flying circles around the tricky Zero.

GOOD YEAR
AIRCRAFT



If You Have A Vibration Problem...

Widely-known complaints are motor vibrations of trouble on automobiles, bicycles and household appliances as well as on individual farm and office machinery. To eliminate such trouble, manufacturers who place a premium on customer satisfaction, will, in the post-war period, use Boots Nuts wherever vibration is a factor. First developed for use on airplanes, where loose connections cannot be tolerated, Boots Self-Locking Nuts withstood severe vibration—they can't come loose.

WHERE RESCUE RIDES ON LIGHTNESS

Lighter than any other nuts. Boots all-metal, self-locking nuts save from 60 to 80 pounds of weight on a single 4-engine bomber. This saving is sufficient to enable that bomber to carry a 7-man rubber life raft with 30 days' emergency rations, signal, repair and first aid kits, oars, rope, sail, survival knife, pistol, landing sickle, whistle, landing basket, sea anchor and tarpaulin. Total weight 70 pounds.

Boots Nuts meet the exacting specifications of all government agencies and are used on every type of U. S. aircraft. They withstand severe plane vibration and the extreme action of oil, salt water or chemicals. They can be used again and again—literally "outlast the plane."

"They Fly With Their Boots on—Eighers"

BOOTS

Self-Locking Nuts For Appliances in All Industries

AIRCRAFT PRODUCTION

1943 Plane Output To Exceed 85,000; Industry Employment Is 1,600,000

President's reference to 15,000 units in two months highlights contrast of 3,623 craft in 1938

By SCOTT HERSEY

The almost incredible job being done by the aircraft manufacturing industry has been no better pointed up than by a brief sentence in President Roosevelt's report to Congress on progress of the war when he said that during the two months' recess of Congress, approximately 15,000 airplanes were produced.

That production record from the industry emphasizes these even more when it is considered that we produced only 3,423 airplanes in all of 1938, of which about 1,000 were military craft. The total in 1939 was 5,119, of which about 3,900 were military airplanes. In 1940, the industry produced only 12,517 airplanes, of which 6,000 were military planes, yet so many airplanes during the entire year as were produced during the two months Congress recessed.

By 1942, the industry was beginning to feel its stride and the output was nearly 20,000 airplanes, of which about 8,500 were civil aircraft. But plane production was suffering maintain and year and reports for 1943 showed more than 40,000 airplanes produced, of which about 1,000 were civil airplanes. The estimates for this year place the total at between 80,000 and 85,000, and this from an industry which five years ago managed to turn out only 3,623 planes.

Back in 1938, the aircraft, engine and propeller plants employed about 45,000 people—not as many as the whole industry as now labor in some single plants. The trend upward in numbers of aircraft workers was comparatively slow, but at the beginning of this year there were nearly a million and the million-employee mark has long since been passed, with women contributing greatly to the total of approximately 1,600,000.

By 1940, Douglas Mfg.—Weekly payroll \$50; the industry total of \$1,202,723 paid in January, 1939, and the industry altogether occu-

pled about 9,844,558 sq. ft. of floor space. Industry banking—there wasn't any. Compare the total floor space with a new assembly hangar which Douglas is going to build at Los Angeles—the site is 12½ acres and the hangar will be 658 ft. long and 342 ft. wide, about 925,000 sq. ft.

The weekly payroll now to all aircraft, aircraft engine and propeller workers is estimated at \$65,000,000 about half as much as the total sales for the industry in 1935. Those can planes work in plants expanded to thousands upon thousands of square feet.

President's Report—The President's report declared that 132,000

airplanes and 345,000 airplane engines have been delivered since the armament program started in May, 1940. Adding emphasis to this achievement was the note that 32,000 of these airplanes were produced during the last eight months of that year.

Despite this magnificent job the industry's work is not yet done. The President's report said "total airplane production is still not good enough. We need not only to speed up to schedule, but to speed it."

Production progress speeded from now on, however, will be gradual, as war production generally began to approach capacity with the peak in aircraft production expected about the middle of next year.

Sees Market for Small Transports

Edward Warner sees "vast" potential airline mileage usable

Although the giant transport is making the headlines, there is a vast mileage of potential air routes all over the world, which could make good use of transport planes of from five- to ten-passenger capacity if such machines can be operated



BUICK MASS PRODUCING PRATT & WHITNEYS

Buick Motors Division of General Motors Corp. releases this photo to show how it is turning out Pratt & Whitney 2,200 hp engines. Fourth quarter output is scheduled to jump 25 percent. Engines are finished engines on assembly floor, covering packaging and shipment to Willow Run, Douglas and Consolidated plants producing Liberators.

economically enough.

Profiled Payload Profited—So says Dr. Edmund P. Warner, CAA vice-chairman. Although conceding that experience with the cost per unit of payload in operating small aircraft as transport service has not been very extensive, Dr. Warner believes that future regulations must differentiate between large and small transports, even though all are in commercial service.

Indicating that such changes will be necessary to permit full service, Dr. Warner says many lines elsewhere throughout the world are rendering vital service to large areas, but they would be compelled to suspend operations if required to meet all standards now laid down for U. S. carriers.

Asserting that in many cases single-engine aircraft could be used for air carrier service, with certain changes in regulations, Dr. Warner stated the possibility of relaxing the standards of single-engine performance for twin-engine planes used on local runs is light traffic.

At any rate, there will be many areas in which choice must be made between having to air transportation at all and having a less luxurious service, just as one less traveled air route, where women lack adequate safety and comfort features.

ARCO Chiefs Study Contract Priorities

West Coast plants will receive consideration on manpower.

The decision as to which war contracts are the most important on the West Coast is occupying the armed services and the Aircraft Production Board at present, acknowledges T. P. Wright, director of Aircraft Resources Control Office, chief agency for AAF and Navy Bureau of Aeronautics.

Some plants will be placed at the top of the production agency list to be presented within the next month to the War Manpower Administration for their manpower priority list.

Heavy Bomber Trend—A production agency committee has been organized in Los Angeles and manpower officials estimated that Seattle, San Francisco and Portland communities would soon be functioning.

The trend in production still stresses heavy bombers.

ARCO and the Aircraft Production Board are concentrating on these phases of West Coast man-

power problems in aircraft plants:

1. Housing units to be built;
2. Diversion of workers from other industries giving aircraft a preference;
3. Better Selective Service control which has been successful as far as extending the original 45-day blanket deferment to another 60 days past Oct. 1;
4. Retaining key people who have been inducted into the service.

Mr. Wright has asked the companies to furnish him a "master list" of key personnel they want back and has the backing of Undersecretary of War Robert Patterson on this project.

5. Getting pay rates up to competing industries.

Incentive Pay—Incentive pay plans have not been abandoned, although the Aircraft Production Board recently stated that the West Coast Aircraft War Production Council was right in many of the points they stressed against the plan. At Boeing, where present output is almost at peak, incentive already could be used. Boeing may be ready shortly for pay incentives, now that labor's demands for no-gradient in rates has been met. Labor originally refused incentive until rates were agreed upon.

Adoption of 10-hr shifts would

mean an increase of 10 per cent in men hours with the same number of employees. Mr. Wright says, and the project, a favorite of Charles E. Wilson, has not been abandoned.

Labor bargaining is induced by the cost-plus-fixed-fee contract. Mr. Wright admits, but sees too many of changing contracts without disrupting production.

New Goodyear Plant To Test Wings, Motors

\$2,300,000 hangar expected to be ready for operation about Dec. 15.

Construction of a new flight hangar at Goodyear Aircraft Corp., for testing wings and engines of Goodyear Corsairs, Navy fighters, is scheduled for completion about Dec. 15.

A contract for the \$2,300,000 hangar, has been let and work is under way. It is being financed by the Defense Plant Corp. The hangar, adjoining the Alton airport, will be built without exterior supports and will be equipped with three free-living traveling cranes to carry finished airplanes within the building and to the flight apron.

The building is the fifth major structure in the Alton group



COUNTER-ROTATING PROP:

Aeroproducts Division of General Motors Corp. reports "large contracts" for mass production of dual propellers to be installed on new airplanes. The AAF only recently permitted the product to be photographed. This display was sponsored by Aeroproducts at the Treasury's "Back the Attack" Show in Washington. The GMC subsidiary will produce production of three and four bladed models. The size on the hub says the propeller is 12 ft. in diameter and "is suitable for an airplane of a P-47 type."

Convair Revises Plan On New Orleans Plant

Will produce PBV Catalina patrol bombers instead of new types.

Consolidated Valve will produce the Seneca PBV Catalina patrol bomber at its New Orleans plant, rather than the previously announced flying boat of new design.

Both PBV Types—Harry Woodhead, president, is announcing the ownership of production, and both the PBV flying boat and the PBV amphibian will be produced at the plant for the Navy's use in survey, reconnaissance and rescue work. The PBV has been used in all theaters of the war and is especially serviceable where air strips have not been established.

Originally the New Orleans plant was acquired by Nash-Reynolds Corp. to turn out cargo versions of the Sikorsky flying boat similar to the passenger-cargo type now being flown on Swiss-Alpine operations by American Export Airlines.

Midshift Movies

WHAT ARE THEY?

Says THE NEW YORK TIMES is a story headline: "Movies In War Plants Can Absorb..." "Midshift Movies, put on during the lunch period, are Hollywood productions registered in 16mm size and rented from film distributors."



WHO USES MIDSHIFT MOVIES NOW?

MODERN INDUSTRY, in an article captioned: "Midshift Movies Build Morale," "Movies for entertainment are fast becoming important supplemental aids to production . . . by an increasing number of companies."

WHERE ARE THEY SHOWN?

Says THE NATIONAL RECREATION ASSOCIATION in a booklet titled: "Activities for War Workers," "The efforts of lunchroom offers an ideal substitute (for an auditorium). The employees in most plants watch the movies while they eat."



WHAT KIND OF MOVIES?

Says Radio Station WABC's WOMAN'S PAGE OF THE AIR: "Most war plant lunch hours last only half an hour . . . which leaves twenty minutes for the film . . . They show short subjects—OR two reels of a feature picture at a time—an adaptation of the old serial shows which definitely reduces absenteeism."

DO WORKERS LIKE THEM?

Naturally! Keeps their interest up, gives them lots to talk about, helps relieve the tedium of bench work by offering complete change of pace.



HOW CAN MY PLANT USE

MIDSHIFT MOVIES—AND WHAT IS THE COST?

As the world's largest distributors of 16mm entertainment films, we are now supplying Midshift Movie programs—specialized features and shorts—to many leading war plants. All you need is a 16mm sound projector, our catalog, and a workshop, camera or auditorium. Write us and we will send complete information by return mail. The cost is ridiculously low!

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THOUSANDS VIST BOEING PLANTS:

Seattle and Renton, Wash., plants of Boeing Airplane Co. opened their gates to families of their workers and thousands streamed past the roof of Flying Fortress Bombers were being produced. "Through them gates pass the most important war workers in the world."

AWPC West in Worker-Ad Drive; Still Await "Coast Plan" Action

Campaign has rumors affecting production and discouraging new labor

By SCHOLER BANGS

West Coast aircraft factories are not waiting for assembly of the conference machinery of the government's "West Coast Plan" to gain a set of 20,000 new workers by the end of this year. Aircraft War Production Council, West Coast (representing all major western aircraft producers), has launched an intensive recruiting campaign using full page ads in Los Angeles and San Diego metropolitan newspapers and bulletins to all employees now in the factories.

AWPC ads and the "employer" bulletins are aimed at enticing rumors that hard production and heavy new labor from outside aircraft shops. Answers are being given to such rumors as:

"The aircraft industry is actually seeking draft favoritism for its people."
"Aircraft workers are draft dodgers."
"Aircraft workers still and loaf on the job."
"Aircraft companies profit from inefficiency through cost plus contracts."

"The aircraft industry is hoarding its people without its workers' love—there is no real labor shortage" and "The aircraft industry is encouraging cancellation of war contracts of other manufacturers."

Most of these employees' Western factories expect the success or failure of the campaign to be shown in two weeks to one month. Office of War Mobilization's West Coast Plan, formally announced in Los Angeles, Sept. 15, by Charles E. Wilson, still is in throes of a struggle.

Chamber Considers Cooperation Program

Committee urges legislation in approaching contract termination

Recommendations for close cooperation both within the aircraft industry and with the government were forwarded by the Joint Chamber of Commerce Economic Development Committee to the board of directors at close of the group's three-day organization meeting in Colorado Springs. It is expected the board will act upon them this week.

On contract termination the Cam-

mittee has no results yet apparent. Industry leaders, aircraft and others, are convinced the plan's success hinges upon the idea Wilson will announce as Chairman of the Program's War Industry and War Manpower Committee.

Industry demands strong committee leadership by men having the confidence of a majority of affected industries. Many western manufacturers were in at 3,000 Los Angeles area small parts aircraft plants deemed new manpower on a par with all frame plants.

Airframe production, according to C. C. Goddard, general manager of the Aircraft Parts Manufacturers' Assn. Los Angeles, can be stepped up only as fast as frame plants are supplied with additional parts and subassemblies. If frame plants have 100,000 new workers to meet new production quotas, it is likely that parts plants will need an equal number of new workers."

Goddard believes manpower turnover and absenteeism can be reduced if the War Department stimulates work initiative by allowing factories to let workers their daily production of planes and parts. Similar belief has been expressed by AWPC members.

Best available information indicates that if aircraft and parts producers need a net of 30,000 new workers each by Dec. 31, the total net need for the aircraft industry will have to be close to 100,000 by year's end.

Twenty-four thousand more employees must be added by North American Aviation's Dallas plant between now and the first of next year, to enable the company to meet under a new contract regarding disposal of surplus aircraft abroad. The committee sought means to avoid "dumping" of surplus craft which would either cripple or destroy the industry.

Members of the Economic Development Committee include Mr. Voorhees Irving H. Taylor, Douglas vice chairman; Mr. J. Sander Aviation Corp. L. A. Hyland, Bendis; James P. Murray, Boeing; Don Flowers, Lockheed; W. L. Williams, Curtiss-Wright; P. A. Hewitt, Cessna; J.

Teamwork

President Roosevelt sent the following letter to James P. Murray, president of the Aeronautical Chamber of Commerce, which was read at the opening session at Colorado Springs, Colo., of the three-day meeting of the Chamber's Economic Development Committee.

"I am glad to learn that the Economic Development Committee of the Aeronautical Chamber of Commerce is holding a meeting and to discuss problems confronting the aeronautical industry."

"We all know how important it has been for the aircraft manufacturing industry to keep the planes rolling off the production line. Many of us know how important to that achievement teamwork has been."

"While never one thing or another, C. C. Goddard, general manager of the Aircraft Parts Manufacturers' Assn. Los Angeles, can be stepped up only as fast as frame plants are supplied with additional parts and subassemblies. If frame plants have 100,000 new workers to meet new production quotas, it is likely that parts plants will need an equal number of new workers."

T. G. Gentry, Jr., General Aircraft, J. Story Smith, Jacobs, R. E. Davis, Goodyear, L. L. Snow, Pratt & Whitney, R. H. Taylor, Republic, Robert B. Lee, Sperry Gyroscopic and R. W. Colvin, Northrop.

North American Plant Needs 24,000 Workers

Kindelberger lost airplane requirements for Dallas factory.

Twenty-four thousand more employees must be added by North American Aviation's Dallas plant between now and the first of next year, to enable the company to meet under a new contract regarding disposal of surplus aircraft abroad. The committee sought means to avoid "dumping" of surplus craft which would either cripple or destroy the industry.

Members of the Economic Development Committee include Mr. Voorhees Irving H. Taylor, Douglas vice chairman; Mr. J. Sander Aviation Corp. L. A. Hyland, Bendis; James P. Murray, Boeing; Don Flowers, Lockheed; W. L. Williams, Curtiss-Wright; P. A. Hewitt, Cessna; J.

House Group Studies Cost of Putting Air Industry Back on Peace Basis

By BLAINE STURBELD

Specific provisions for cost of converting the aircraft industry back to a peace basis are under serious consideration by the House Ways and Means Committee, which has been holding hearings on proposed revision of the war contract renegotiation law.

Competent and informed sources and the proposed means of authorizing aircraft and some other industries to reconvert their plants would be a combination of liberalized importation and tax breaks. Any concessions would, of course, bring demands from many industries for special consideration regarding the steep from the gains would be a tough job.

Calley, Damon Toddy-Franco A. Calley, vice-president of Consolidated-Vultee, testified before the committee for the war contract of the industry, and Ralph B. Damon, vice-president of American Airlines former president of Republic Aircraft, spoke for the eastern group. Congressman Charles McNair said the two men did a masterful job of presenting the case for aircraft.

Whatever recommendations the committee may bring will be final. Both houses of Congress, plus Senate and conference committee will wrap the transition program this way and that. Inevitably involved in the aircraft and general industry shift to civil status are plant liquidation, termination of contracts, demobilization of military and war plant manpower, and disposal of war surplus equipment.

Whatever these aircraft makers may be dealt with, singly or rolled into one, the outlook for a fair break for aircraft and other industries, is promising. In fact, a report by

Stewart, Davis and Co. says, though not approved, says it is the obligation of the federal government to underwrite, by direct payments, the burden of retooling industry to produce civilian goods. Merely to allow industry to scramble funds for this purpose is not enough, the report states. The report opposes repeal of the renegotiation law.

No Government Aid—There is no doubt that Congress would consider an outright industrial conversion and rehabilitation program if called upon to do so. It seems, however,

that hardly anybody, on the Hill or in industry, wants "government aid." An informed spokesman said airplane manufacturers want only relocation to their former status and a chance to expense inventory.

This source added that the public wants to see the country's aviation in a strong post-war position, including both production and operations—just Congress issues that it seems to back a plan by restoring the industry to a sound business basis. There is no guarantee in yet that this will be done; all members of the industry are asked to keep in touch with the government and urge their right to relocation.

Mr. Calley, speaking to the Ways and Means Committee, reiterated recommendations previously made to the House Naval Affairs Committee. He asked that renegotiation be based on net earnings after taxes instead of before taxes, that earnings be considered for the duration of the war, not for a single year, that the industry may have reserves to survive. Recommending renegotiation after taxes, Mr. Calley suggested that the Treasury set its share first and then the renegotiation share be determined, whichever they decide represents an excessive profit for work done. The net cost to the government, he said, is the manufacturer's cost of production less net earnings after taxes—for the losses which out of the process.

Air Industries Profit—Mr. Damon said, "It is one of the mischievous things of the war industry that we need have forced the government to demand that it carry an immense burden of financial responsibility upon a small basis of invested capital."

The average industrial corporation, he said, has current assets in ratio of 2.2 to 1 of immediate obligations at the end of 1942. But the aircraft build had current assets of only 1.49 times its current liabilities. In other words, the value of all current assets, including inventories was barely enough to meet its current debts. Any shrinkage in the value of inventories, even a minor shrinkage, Mr. Damon said, would make the industry unable to meet its debts. His figures were based on a Harvard Business School survey of eleven companies producing 75 percent of U. S. planes.

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In connection with Northwest's plan to upgrade and through New York, across the North Atlantic and to serve over 400 communities throughout New England by means of a helicopter system. Start was formerly with National Aviation Corp and the Federal Reserve Bank John Mack. Mack was named assistant director of Northwest Airlines Pilot Training School. He was formerly with Continental Air Lines, and received his first flight training with the Royal Flying Corps in Bombay, India, during World War I. James Edmunds, formerly with Lee Higginson and Brown-Harrison Co., has been named traffic representative for the Boston office for Northwest Airlines.



John J. Ryan, Republic Airlines Corp. president, has been elected a vice-president of the company. Formerly associated with the law firm of Hinckley Platt & Walcott, Ryan came to Republic in July, 1948, to handle legal aspects of financing an expansion program which included new plant construction at Farmingdale and Yonkersville, Ind.



HUGHES' NEW AIDE

E. J. "Doc" Egan, recently appointed manufacturing agent for Hughes Aircraft at Culver City, recently saw some more good news in the midst of the Hughes business. Egan, who is now in charge of the new office, as he has been his agent for many years, as they go on and at the same time keep a weather eye on the Hughes-Kaiser group flying boats now building. He is shown looking through one with H. Bonds, assistant manufacturing superintendent.

The Navy Bureau of Aeronautics has announced the following promotion from lieutenant commander to commander:

Arthur D. Pomeroy, assistant director of the photographic division, Paul F. Macdonald, Jr., head of the maintenance section and equipment branch. Thomas C. Smith, head of the aircraft test control group, Robert M. Kowalski.



AAF'S 25-YEAR VETERANS HONORED

Few persons have remained with one employer as long as 25 years as long as 25 years service past. A group of about 50 civilian workers at Wright Field, believed to be the largest number, began of 25-year employees in U. S. Air Force, recently received medals and official congratulations from Maj. Gen. Charles E. Broadhead, commanding general of the Materiel Command, Wright Field. The employees have worked in experimental and procurement jobs at both Wright and old McCook Field. Among are: Gen. Broadhead, J. J. Horneau, William E. Donnelly, the demand the companies names of "P" for experimental, "C" for J. A. McGowan, Arthur W. Blanton, "Gray" Kier and J. B. Lee.

the VPK (patent booster) design section, Thomas R. Trevi, assistant in the VP (lighter) design section, James H. Bolson, assistant in the radio and electronic section and Frank H. Miller, assistant in the advanced hose section.

Paul E. Hovagel, chief research engineer and chief designer with the Glenn L. Martin Co. for the past three years has rejoined Curtiss-Wright Corp. as assistant to the director of engineering at Buffalo, N.Y.



He will be in charge of the wind tunnel and flight research work with Curtiss-Wright, before that was chief engineer.



BOIG HONORED

Harold J. Boig (right), president of Pan American-Globe Airways, shown here with the president of Bolivia, has received the order of the "Cruzado de las Andes," highest civilian honor bestowed by the government of Bolivia, at a reception in New York last week.

member of the Travel Air Manufacturing and with Keystone Aircraft Corp. Robert Astorga, Pan American-Globe Airways, shown here with the president of Bolivia, has received the order of the "Cruzado de las Andes," highest civilian honor bestowed by the government of Bolivia, at a reception in New York last week.

Appointed chief pilot of TWA's Eastern and Midwest divisions respectively, were William H. Scales (right), senior pilot since 1928 with



TWA and its predecessor companies, and C. E. Rube (left), former Western regional chief pilot.

FINANCIAL

Prospects for More Dividends By Airlines Appear Doubtful

Backbucker statement urging postponement of payments turns spotlight on slim chances for many more checks to stockholders.

By ROGER WILCO

When Captain Rickenbacker recently proposed a postponement on earnings to dividends, nothing new was added as far as the air transport industry was concerned.

Dividend payments to stockholders by air carriers has been very meagerly during the early development of the industry, there were no earnings to distribute. In recent years when profits have begun to appear, it has been found necessary to "plough" back such earnings to facilitate the continued growth of the lines.

A case history of the airline dividend record of the air carriers hardly encourages mutual income payments to the stockholders.

Captain Rickenbacker's Eastern Air Lines says its incorporation in 1938, has earned an aggregate of \$11.75 per share through 1942, but has not paid any cash dividends to stockholders.

Airline Airlines.—This carrier has the best dividend record among the major carriers but would seem qualify as a liberal income disbursement. The company stock received \$1.00 per share in 1940 and \$1.50 in 1941 as well as in 1942. Of course regular annual dividends of \$1.25 per share have been maintained regularly as the company's preferred stock.

One of the best dividend records is held by Delta Air Corp. This operator prior to its first one stock split-up in 1941, paid \$2.00 per share in 1935 and \$1.50 each in 1939 and 1940. During 1942, 30 cents per share was paid on the new stock which is equivalent to \$2.00 on the old stock before the split-up.

Midwest.—Northwest thus far has paid two annual dividends of \$4 cents each in 1942 and 1943.

A TWA stockholder has to refresh his memory back to 1935 when he received 25 cents per share, representing the sole cash dividend that company ever paid.

United Air Lines paid 20 cents per

share in 1936 and resumed payments of 10-cent dividends early this year.

Chicago & Northern Airlines received 15 cents per share in 1939, 30 cents in 1942 and the same amount this year in 1943.

Western Air Lines paid 25 cents per share in 1936 and nothing since. As far as can be determined from the records none of the other domestic air carriers has paid any cash dividends on stock. An exception to this is, of course, the relatively small amount of preferred stock issued by Pennsylvania-Central, Continental and formerly outstanding by Chicago and Southern.

Pan American.—This international operator paid \$1.50 per share in 1938, nothing until 1941 when \$1.00 was paid. The same amount was paid during 1942.

Since the expansion program for the separate air carriers only becoming judged by assumed profits, it is difficult to see how the lines will have much cash to spare for stockholders in the near future. If anything, the carriers will need likely to intercept to husband their resources and seek as much additional capital as they can.

Aviation Stock Sale Trend Continuing

Just Tripp disposes of \$230 shares of PAA, assuming \$9.15.

Aviation officials continued for the most part to liquidate rather than purchase securities of their own companies. This is revealed in the July summary of transactions received by the Securities and Exchange Commission. It continued the trend as indicated by the June trades and as reported in AVIATION NEWS for Aug. 30.

Among the more significant transactions was the sale by Just Tripp of 1,250 shares of Pan American Air-

ways in July, leaving a balance of 23,813 shares owned directly by him. A related report reveals that he previously disposed of 5,000 shares during June. Tripp, created by Mr. Tripp continue to hold an aggregate of 10,000 shares. These shares, as officially reported, fall short of the 45,800 total attributed to Mr. Tripp in one of the recent articles in the Saturday Evening Post.

Pan American Bought.—Five officers of Pan American Airways accumulated a total of 4,645 shares during July. However, the indications are that the stock was purchased through option arrangements issued by the company. These officers and the stock purchased are as follows: Harold A. Bixby, 1,800; John C. Cooper, Jr., 1,355; H. Preston Harris, 1,400; John C. Woodbridge, 1,400; and Evan R. Young, 3,000 (net).

Outstanding were the continued sales by Western Air Line officials. W. A. Crolier sold 2,000 shares, leaving a balance of 18,585. L. H. Dwyer sold 2,000 shares, leaving a balance of 8,586. These two officials also sold heavily during May. June, Stanley W. Day sold 1,000 shares, leaving 1,200 shares during May and June, retaining 3,180.

Aviation Corp. Sales.—Material sales were effected by two Aviation Corp. officials. Victor E. Renner, president through a restricted company, sold 1,000 shares, leaving a balance of 16,000. He was held 42,000 shares in his own name. During May, June and July, William P. Wilson, an officer, disposed of 2,484 shares retaining 1,221.

Other significant trades by aviation officials in their own securities included the following:

Transactions		Shares	Price
4 August 1—Official	Shares		July
Stratton	PL 000101000		
Joseph H. Brown officer	4,000	1,000	
Samuel H. Brown officer	4,000	1,000	
Samuel H. Brown officer	750	24,000	
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New Technical Review Unit

THE ARMY AIR FORCE is considering establishing a small committee of officers, with Navy aviation representation, to advise and rule on release of technical information to the press.

Such a move, whether by intelligence or public relations, is needed. There appears to be some confusion in review and censorship offices on what information has already been released, how much, and by whom. So, there is uncertainty as to what new clearance decisions may be made.

The result may be to question advisability of printing the information, even though it might

have appeared in print a year or two ago. This is because a group of aviation specialists which could serve all government intelligence and review agencies does not exist.

Such a committee could be of immense aid to aviation. It could also act immediately on the basis of new information and authorize publication of new facts as soon as the need for further secrecy on a technical item is ended. Britain has had marked success with such an official technical information review body and the AAF should set up a similar group of specialists.

Prospect for Local Services

THE AIRLINES will settle down September 28 to considering CAB that local service is essential for the future. So will other companies which would like to compete with the present carriers for regional networks.

CAB's investigation of possibilities of local, feeder and pickup services will bring together the most important facts and statistics we have yet seen on scheduled flying, county by county.

It is no secret that some CAB people are convinced the large airlines have underestimated their local territories in charting post-war plans. The International field beckons, instead. The hearings starting this week should show who holds the best grip of the problems which must be solved.

There is also the mistaken notion in some segments of the industry of thinking of local services solely in terms of supplemental systems feeding into the transcontinental trunkline. If truly local air service ever serves an important percentage of

air travelers will never board a transcontinental line. The investigation should show this.

It should also result in agreement on one or two standard types of local service transport plane. If initial designing could be started shortly, and completed within a year, some observers are convinced production could then start immediately upon proper governmental approval. In the meantime, CAB would be completing route hearings to determine proper certificate holders.

Much, of course, depends on the first day's proceedings, when the CAB's economic and safety bureaus present their introductory material and the Aeronautical Chamber of Commerce submits its studies on local service problems. These exhibits may be surprising, certainly they will be interesting.

The proceedings should eliminate much prattle on a vital subject and prepare for the time when air transportation will serve all of the people.

A Patent Program That Works

ONE OF THE REMARKABLE and generously unthought-of features of the mighty aircraft production program is the *McDonnell Aircraft Association*, which was organized in 1917 to establish cross-licensing of patents and simplify interchange of technology and remains almost unchanged in its operation from World War I. Membership is open to all firms, and most of the 40 leading companies belong. Some basic principles in the industry go back to the Wright Brothers. Although patents on these are held by a few companies, all others use them. Without cross-licensing lawsuits could threaten operations constantly. MAA itself, however, owns no patents, merely handling receipts and disbursements of license fees for members. Recently, members have agreed to submit their

new patents to MAA arbitration boards, specially created for each patent case, which set the value of the patent and the royalty payment, if any. Result has been to encourage employees to report their production ideas. Consolidated-Valve is carrying special effort at its 12 divisions to garner the crop from ingenious inventors on its payroll.

"This acceleration of inventions benefits the entire industry," an executive points out to the News. "At the same time the employee whose useful idea might otherwise never see light—or if it did perhaps without proper patent protection—has its own interests furthered and benefits aircraft production in the shortest possible time." The inventors receive a percentage of income derived by the company.

ROBERT H. WOOD



PRODUCTION ON SCHEDULE

The splendid performance of America's aircraft in World War II, a tribute to the men who make them . . . as well as those who fly them.

For it takes management, planning, engineering, procurement, tooling, training, skilled workmanship, and coordinated effort of the highest order to produce planes in adequate quantities . . . on schedule.

At McDonnell, we have met production requirements . . . on planes, parts, and plastics on schedule.

Behind this successful production performance is a well-coordinated organization of seasoned aircraft executives, engineers, research workers, tooling

experts and production specialists . . . who have passed along the results of many years' experience to thousands of earnest hard-working shop personnel.

Two additional factors have contributed materially to our ability to meet production requirements on schedule: a record of never having had a week's stoppage due to disagreements between management and personnel or their collective bargaining representatives; and a policy of multiplying and facilitating production through sub-contracting as necessary.

We shall welcome further opportunities to serve our country's war effort.

McDONNELL Aircraft Corporation
Manufacturers of PLANE • PARTS • PLASTICS • SAINT LOUIS • MEMPHIS

Our Back Yard is the Stratosphere

40,000 ft.

35,000 ft.

30,000 ft.

25,000 ft.

THUNDERBOLT'S OWN BACK YARD!

MILITARY airmen know that this is the day of *specialized* planes... designed to do specialized jobs. Some planes are best for ground-strafting... others for medium-level fighting... and so on.

Our back yard is the stratosphere. The Republic Thunderbolt is built to fight at 35,000 feet and up. It protects high-flying bombers.

Powered with a 2,050 horsepower engine, the Thunderbolt flies at more than 400 miles an hour. Its turbo-supercharger assures greatest efficiency in the rarified upper air.

The strato-sphere is the strategic area... the ceiling... of today's global air war. Because of the higher speeds it permits... and its freedom from turbulent weather... the stratosphere will be the favored path of tomorrow's high-speed transportation. Thus, the high-flying Thunderbolt anticipates happier things to come.

Republic Aviation Corporation
Farmingdale, New York—Evansville, Indiana

REPUBLIC
P-47 THUNDERBOLT

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Aviation

SPECIALISTS IN HIGH-SPEED AIRCRAFT



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